

Book news

1. New books

● Australian Institute of International Affairs. *Uranium — energy source of the future?* Canberra, the Institute (Box E181, P.O., Canberra, A.C.T. 2600, Australia), 1979. 202 pp. A\$4,95 (postage 50c).

This book was commissioned by the Australian Institute of International Affairs and is published by Thomas Nelson Australia Pty Ltd. The nuclear power source has been a centre of controversy throughout the world for the last few years. Possessing about a fifth of the world's known uranium deposits, Australia has a significant part to play in the international debate. In this book two eminent authorities, with opposed views, argue points for and against the expansion of the uranium power source as an energy alternative. They discuss the technological, environmental, and moral issues. Each provides a strong argument to support his case and these arguments are highly relevant on the world scene. Professor Sir Ernest Titterton is one of the world's authorities on the use of nuclear power. He is Professor of Nuclear Physics at the Australian National University. F. P. J. Robotham is Radiation Protection Officer at the University of Melbourne. He is an active member of the Movement against Uranium Mining.

● Euroeconomics. *The steel industry in Western Europe: industrial and financial indicators.* Paris, Eurofinance (9 Avenue Hoche, 75008 Paris, France), 1979. 167 pp. FF4,500 (Available in English and French.)

This is the second volume in a new series that objectively analyses the steel industry through its years of crisis.

● M. B. Piggott. *Load-bearing composite materials.* Oxford, Pergamon Press, 1979. \$15,00.

This book provides engineers and scientists with a good working knowledge of why, where, and how fibre composites should be used. It introduces the basic concepts of elasticity in solids, and discusses the physical basis for some of these properties. The great potential of filiform materials is described, and the mechanics of their interactions with polymer and other matrices.

● J. H. E. Olaf. *Automation and remote monitoring and control in mines.* Essen (West Germany), Verlag Glückauf GmbH, 1979. 200 pp. DM36. (In English.)

The concentration of workings and the increase in the output of the modern underground mining industry led to ever larger and more powerful machines and equipment, the optimum operation of which is possible only with full monitoring of the systems. Besides, the need for greater safety and more rationalization called for the automation of mining operations underground by means of novel technical methods, remote control being a condition for automation. According to the current state of the art, present methods of communications and data transmission, automation in conveying and haulage, control of mine ventilation and supplies of energy underground, automation in winning, especially of coal and roadheading, as well as the optimization of quality in preparation, are described. This book is the

result of team work between the Steinkohlenbergbauverein and its Central Research Institute with experts of the IEA MTCH.

● J. P. Jenkins and E. T. Brown (eds). *KWIC index of rock mechanics literature.* Oxford, Pergamon, 1979. 742 pp. £60.

The work is a consolidated, computer-produced index to the technical literature in the field of rock mechanics, and has been compiled from the material appearing in *Rock Mechanics Abstracts* and *Geomechanics Abstracts* during the period 1970-1976. Only material relating to rocks has been selected. The work comprises a subject index, author index, and source listing. The subject index is a KWIC (Key Word in Context) index formed from the significant words in the title of each item, there being an entry in the index for each such word. The key words are displayed centrally in alphabetical order, and in the context of the remainder of the title. There are approximately 9000 references. This is a reference work for mining, civil engineering, geology, and rock mechanics courses, and of interest to rock mechanics specialists at all levels (undergraduate and post-graduate) in universities and colleges. It will also be of interest to contractors, consultants, and research organizations.

● R. J. Wakeman (ed.). *Progress in filtration and separation* 1. Amsterdam, Elsevier, 1979. 346 pp. Dfl.110,00.

In this multi-author series, each volume will provide critical reviews of current research and the results of new or recently utilized techniques in the technology of filtration and separation and adjoining disciplines. The contents of this, the first volume of the series, are as follows: Introduction. Adsorption on heterogeneous surfaces (R. R. Zolanz and A. L. Myers). Eddy-current separation methods (E. Schloemann). Studies of electrically enhanced sedimentation, filtration and dewatering processes (H. Yukawa, K. Kobayashi, H. Yoshida and M. Iwata). Theory of gravity thickening (D. C. Dixon). The theory of deep bed filtration (R. Rajagopalan and C. Tien). The efficiency of separation processes (L. Svarovsky). Stage and point efficiencies for barrier separation processes (K. K. Sirkar and G. H. Rao).

2. New journal

As from 1980, *Coal Calendar* is being published as a separate monthly periodical. All organizations receiving *Coal Abstracts* will automatically receive *Coal Calendar* at no charge. Subscription rates for the new *Coal Calendar* are £12 for IEA member countries and £18 for non-member countries. For orders or further information, contact Editor of *Coal Calendar*, Technical Information Service, IEA Coal Research, 14/15 Lower Grosvenor Place, London SW1W 0EX, England.

3. Proceedings

● L. E. St Pierre and G. R. Brown (eds). *Future sources of organic raw materials.* Oxford, Pergamon, 1979. 612 pp. £22,50.

This volume contains the proceedings of CHEM-

RAWN I (The World Conference on Future Sources of Organic Raw Materials, which was held in Toronto from 10th to 13th July, 1978). The Conference was a project of the IUPAC programme, Chemical Research Applied to World Needs (CHEMRAWN). The Conference defined and set in perspective those factors that will ultimately determine the sources of organic raw materials necessary to support world chemical industries at the end of the century. The main topics are as follows: Planning for Future Resources; Advanced Technologies for Coal, Wood, and Related Feedstocks; New Directions in the Production of Renewable Resources; Conversion and Utilization of Renewable Resources; Planning for Future Resources; Advanced Technologies for Coal, Wood, and Related Feedstocks; Future Feedstocks from Petroleum, Oil, Shale, and Tar Sands; New Approaches to the Chemistry of Renewable Resources.

● P. Haasen, V. Gerold, and G. Kostorz (eds). *Strength of metals and alloys*. Oxford, Pergamon, 1979. 3 vols., 1800 pp. \$200.

These volumes represent the proceedings of the Fifth International Conference on this topic, which was held at Aachen in August 1979. They contain over 190 technical and review papers, and form an authoritative current state-of-the-art review of this important subject. The 3-volume set provides a comprehensive, timely, and readily accessible source of information on all facets of the field. The major subject areas covered are as follows: plasticity and crystal structure; friction and wear; creep; dynamic effects in deformation; precipitation and dispersion hardening; deformation of polycrystals; solid solution hardening; fatigue; *in situ* microscopy during deformation; combination of elementary hardening mechanisms.

● K. J. Miller and R. F. Smith (eds). *Mechanical*

behaviour of materials. Oxford, Pergamon, 1979. 3 vols., 1800 pp. U.S.\$200.

These volumes reproduce the proceedings of the Third International Conference on Mechanical Behaviour of Materials, which was held at Cambridge in August 1979. They contain over 140 technical and review papers, and provide an authoritative, current state-of-the-art review designed to enable engineers and materials scientists to define, examine, and identify routes to solutions to current engineering problems. The major subject areas covered by the Conference are as follows: high temperature deformation and failure; environmental and time-dependent effects; forming and machining of materials; designing with brittle solids; designing with new materials; fast fracture in ductile materials.

4. Tax relief?

The Publishers' Association of Great Britain recently issued a circular to a number of professional bodies drawing their attention to a court decision in favour of tax allowances on the purchase of textbooks. In January 1977, the Court of Appeal upheld the case of a barrister in the case of *Mumbai v. Furlong* that his textbooks were 'plant' and necessary for the purpose of carrying on his profession. The implication appears to be that, for tax purposes, books (Law Reports, but effectively any high-cost sets and in principle all professional and technical books) qualify for 'capital allowances', and the entire cost of such purchases may be deducted from taxable profits immediately or over a period of years. Before this decision, no deduction at all could be made for high-cost sets, although single professional books were probably included in deductions from profits in the same way as periodicals and journals. This may well be of considerable significance to members of professions where books for consultation constitute a major item of expenditure.

Electroheat

The International Union for Electroheat, which comprises a score of highly industrialized countries, every four years organizes a congress at which experts discuss the technicalities and economics of the latest applications of electroheat in industry and other sectors.

The next congress will be held at Cannes (France) from 20th to 24th October, 1980. The congress programme will include the presentation and discussion of some 150 papers in the following sections:

1. Metallurgy

- Arc furnace
- Induction furnace
- Other processes

2. Mechanical engineering and metal-working industries

Direct and indirect resistance heating

3. Advance technologies

Plasma, laser, electron-beam, and glow-discharge processes

4. Other industries

Chemical; food-processing; textile, paper, and cardboard; glassmaking; building-materials industry

5. Electric space heating and air-conditioning

6. General problems

Energy consumption; heat recovery; prospects for future development of electroheat, etc.

Further information is obtainable from Comité Français d'Electrothermie, 79 rue de Miromesnil, 75008 Paris, France.

Company Affiliates

The following members have been admitted to the Institute as Company Affiliates.

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Natal Cambrian Collieries Limited.
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O'Okiep Copper Co. Ltd.
Palabora Mining Co. Ltd.
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President Steyn Gold Mining Co. Ltd.
Pretoria Portland Cement Co. Ltd.

Prieska Copper Mines (Pty.) Limited.
Rand Mines Limited.
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Rooiberg Minerals Development Co. Ltd.
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Rustenburg Platinum Mines Ltd. — Rustenburg Section.
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Corrigenda: March issue

The following amendments should be made to Table II of the paper 'Commodity analysis: its application in the context of the South African mining finance house', by I. C. Robinson and D. G. Keefe, which appeared in the March issue of the *Journal* (vol. 80, no. 3, p. 114).

- (1) The heading of the last column should read:
1979/80
Peak?
- (2) The value for lead in the last column should read:
1,1979